

**BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO**

In the Matter of the Application of)
Ohio Power Company to Initiate its) **Case No. 19-1475-EL-RDR**
gridSMART® Phase 3 Project.)

APPLICATION

1. Ohio Power Company (“AEP Ohio” or the “Company”) is an electric light company, as that term is defined in divisions 4905.03 and 4928.01(A)(7) of the Ohio Revised Code, and is subject to the jurisdiction of the Public Utilities Commission of Ohio (“Commission”).

2. In AEP Ohio’s first electric security plan proceeding (“*ESP I*”), the Company proposed and was granted approval for gridSMART® Phase 1, a smart grid deployment project within AEP Ohio’s service territory. In its order in that proceeding, the Commission authorized AEP Ohio to establish the gridSMART Rider, subject to annual true-up and reconciliation.¹ In its March 18, 2009 Opinion and Order in *ESP I*, the Commission noted the benefits of the gridSMART project:

[I]t is important that steps be taken by the electric utilities to explore and implement technologies * * * that will potentially provide long-term benefits to customers and the electric utility. GridSMART Phase 1 will provide [the Company] with beneficial information as to the implementation, equipment preferences, customer expectations, and customer education requirements * * *. More reliable service is clearly beneficial to [AEP Ohio’s] customers. The Commission strongly supports the implementation of AMI and DA, with HAN, as we believe these advanced technologies are the foundation for AEP-Ohio providing its customers the ability to better manage their energy usage and reduce their energy costs.²

¹ *In re AEP Ohio ESP I*, Case Nos. 08-917-EL-SSO, *et al.*, Opinion and Order, at 37-38 (Mar. 18, 2009).

² *Id.* at 37.

3. The Company's gridSMART Phase 1 project took a community-based approach and incorporated a full suite of advanced smart grid technologies for 110,000 customers in an area selected for its concentration and diversity of distribution infrastructure and customers. Its focus on technology, implementation, operations, consumer and stakeholder acceptance, data management, and benefit assessment enabled the Company to integrate commercially available products, innovative technologies, and new consumer products and services within a secure two-way communication network between the utility and consumers. The Phase 1 project improved distribution operations and improved reliability by identifying and responding to outages more quickly. It also improved distribution efficiency by reducing customer energy consumption (and retail power costs), reduced peak demand, and significantly reduced carbon emissions.

4. In its order in AEP Ohio's second electric security plan proceeding ("*ESP II*"), the Commission reaffirmed its conviction regarding the benefits of the gridSMART project and directed the Company to continue gridSMART Phase 1 and to initiate Phase 2 of the gridSMART project.³ In the *ESP II* decision, the Commission also approved the gridSMART Phase 2 Rider ("gridSMART Rider") for recovery of "[a]ny gridSMART investment beyond the Phase 1 pilot" that is not already subject to recovery through the Company's Distribution Investment Rider (DIR).⁴

5. The larger Phase 2 project followed the success of the Phase 1 project by deploying proven technology solutions to deliver advanced metering infrastructure (AMI), distribution automation circuit reconfiguration (DACR), and volt/var optimization (VVO) to more customers over a larger portion of AEP Ohio's service territory.

³ *In re AEP Ohio ESP II*, Case No. 11-346-EL-SSO, *et al.*, Opinion and Order at 61-63 (Aug. 8, 2012).

⁴ *Id.* at 63.

6. Continuing to “find significant long-term value and benefit for AEP Ohio and its customers with the implementation of advanced metering infrastructure, distribution automation, and other smart grid technologies,” the Commission granted the Company’s request to continue the gridSMART Rider with certain modifications in the Company’s third electric security plan proceeding (“*ESP III*”).⁵ Specifically, the Commission approved the Company’s request to transfer remaining gridSMART Phase 1 costs to the DIR and to use the gridSMART Rider to track gridSMART Phase 2 costs.⁶

7. On April 25, 2018, the Commission again affirmed its support for AEP Ohio’s gridSMART programs in the Company’s fourth electric security plan proceeding (“*ESP IV*”), approving the continuation of the gridSMART Rider through May 31, 2024.⁷

8. Through this Application, AEP Ohio presents its proposed continuation of gridSMART deployment through a set of programs referred to as gridSMART Phase 3. GridSMART Phase 3 will build upon AEP Ohio’s successful Phase 1 and Phase 2 experience, with a focus on:

- a. Expanding the reliability benefits of DACR, deploying DACR on an additional 80 schemes and 416 distribution circuits;
- b. Deploying Distribution Supervisory Control and Data Acquisition (D-SCADA), which provides details information about the existence and locations of outages to dispatchers, improving reliability, safety, and service restoration speeds, on 160 distribution circuits;

⁵ *In re AEP Ohio ESP III*, Case No. 13-2385-EL-SSO, *et al.*, Opinion and Order at 51-52 (Feb. 25, 2015).

⁶ *Id.* at 52.

⁷ *In re AEP Ohio ESP IV*, Case No. 16-1852-EL-SSO, *et al.*, Opinion and Order at ¶ 93, 270 (Apr. 25, 2018).

- c. Implementing the energy efficiency and retail power cost savings of VVO, deploying VVO on an additional 190 substation buses and 492 distribution circuits;
- d. Completing the deployment of AMI to the Company's remaining customers by replacing an additional approximately 475,000 existing meters with "smart" meters;
- e. Deploying fiber optic infrastructure in areas of AEP Ohio's service territory without readily-available broadband service;
- f. Installing a distribution line sensor demonstration of 3,100 total sensors on non-SCADA stations, hard-to-patrol segments of Phase 3 DACR circuits, and locations that have not received other reliability improvements to assess that technology's reliability benefits;
- g. Implementing an Incremental VVO pilot through the installation and evaluation of 340 Dynamic Voltage Controllers (Distributed VAR Compensators, or DVCs) units on 20 circuits to analyze options to maximize future customer energy savings, peak demand reduction, and other benefits;
- h. Continuing to deploy and manage the Company's It's Your Power application, which facilitates customer access to AMI interval data; and
- i. Adding functionality to provide AMI data to competitive retail electric service providers via electronic data interchange for customers on time of use programs.

9. The Direct Testimony of Scott S. Osterholt, filed contemporaneously with this Application, provides additional detail regarding the robust suite of equipment and technology proposed as part of Phase 3 and discusses the demonstrated success, cost-effectiveness,

feasibility, and anticipated customer benefits of the proposed technology. It also details the business case, including expected benefits and costs, associated with the gridSMART Phase 3 project.

10. Upon Commission approval of this Application, AEP Ohio proposes to begin gridSMART Phase 3 activities and to recover the costs of its Phase 3 investments through the gridSMART Rider. Consistent with the gridSMART Rider's current operation, the Company would make an annual filing with the Commission to true-up and reconcile the actual costs of investments placed in-service and the revenues collected through the rider during the prior period.

11. This Application is also accompanied by the Direct Testimony of Dona R. Seger-Lawson, which provides a projection of the revenue requirement for the gridSMART Phase 3 project over the next 15 years, provides rate calculations and typical bill impacts, and discusses how gridSMART Phase 3 will advance the state policies enumerated in R.C. 4928.02.

12. Because the authority to make this filing results from the Commission's *ESP IV* orders, and because this Application, its attachments, and the supporting testimony filed contemporaneously with the Application include sufficient detail on the equipment and technology proposed for inclusion in the gridSMART Phase 3 project and their demonstrated success, cost-effectiveness, feasibility, and customer acceptance, AEP Ohio does not believe a hearing in this matter is required or needed. Instead, the Company requests that the Commission establish an opportunity for the filing of comments and reply comments regarding the Company's gridSMART Phase 3 proposals. Alternatively, if the Commission does wish to schedule an evidentiary hearing, the Company requests an expeditious schedule in order to avoid an unreasonable delay in the implementation of gridSMART Phase 3 programs.

13. The proposed gridSMART Phase 3 project will build upon AEP Ohio's successful gridSMART Phase 1 and Phase 2 experiences and deliver the benefits of the Company's gridSMART initiatives to a broader customer base. The proposals in this Application are just and reasonable and were contemplated by the Commission when it approved the continuation of the gridSMART Rider in *ESP IV*.

WHEREFORE, AEP Ohio requests that the Commission find and order as follows:

1. That the Commission adopt an efficient and expeditious procedural schedule for consideration of the Application;
2. That the Commission approve this Application to initiate Phase 3 of the gridSMART project, including approval of any accounting authority needed to implement the proposal; and
3. That the Commission issue such other orders as may be just and proper.

Respectfully submitted,

/s/ Steven T. Nourse

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Summary: Application -In the Matter of the Application of Ohio Power Company to Initiate its gridSMART Phase 3 Project electronically filed by Mr. Steven T Nourse on behalf of Ohio Power Company